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Artificial intelligence applications and the reduction of accounting errors in bank financial statements: Evidence from the Iraqi banking sector

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Abstract

This study examines the extent to which artificial intelligence (AI) applications contribute to reducing accounting errors in bank financial statements, with a focus on the obstacles facing their adoption in accounting practice. Using a descriptive-analytical approach, a structured questionnaire was distributed to 100 preparers and auditors of financial statements in the Iraqi banking sector, yielding 91 valid responses for analysis. The findings indicate that AI applications can detect discrepancies between the methods used to prepare banking financial statements and standard or cross-country practices, and can identify the party responsible for an accounting error, regardless of its size. However, the results also show that AI applications lack the discretionary judgement that human auditors apply in assessing the materiality of an error and its broader implications for banking operations. The study recommends that preparers and auditors of bank financial statements leverage AI's error-detection capabilities, irrespective of error size, to improve the accuracy and reliability of financial statements in the banking sector. The findings contribute to the growing literature on AI-enabled auditing and offer practical implications for bank management, financial statement preparers, and regulators in emerging banking markets.

***Keywords*:** Artificial Intelligence, Accounting Errors, Financial Statements, Bank Auditing, Machine Learning, Neural Networks, Deep Learning, Iraqi Banking Sector

JEL Classification: M41, M42, G21

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1. Introduction

Accuracy in preparing financial statements is one of the most important factors that businesses strive for, as these statements clearly reflect the results of their operations over a specific period and have implications for the value of the business, in addition to their use by stakeholders. Therefore, errors in the preparation of financial statements must be detected before their publication. It is crucial to emphasize that any error must be unintentional and spontaneous; otherwise, it is considered fraud. For this reason, management often relies on internal auditors who are professional and competent, as well as external auditors who are reputable and rigorous in their auditing process. Given that the Iraqi banking sector is among the largest economic sectors, and the private sector is the largest sector traded on the Iraq Stock Exchange in terms of trading volume and the number of listed banking companies, the importance of accurate financial statements is further amplified by their impact on the Iraq Stock Exchange index. Therefore, the management of private Iraqi banks must use all means to ensure that their issued financial statements are accurate. For this reason, they rely on all traditional means and methods in terms of controlling the accounting cycle and using internal and external auditors with extensive experience. They should also pay attention to modern means that allow for the automatic detection of accounting errors, such as electronic programs and artificial intelligence applications, which have become widely used in all fields, including accounting fields, due to their accuracy and the reduction of time and expenses. The improper application of specialized accounting standards in the banking sector, coupled with the lack of necessary skills among Iraqi financial statement preparers compared to their counterparts in other countries, may lead to errors in the financial statements of the Iraqi banking sector. However, these errors can be minimized through the use of modern and advanced methods that assist in preparing these statements and detecting errors when they occur. One such modern method is artificial intelligence. Therefore, the research problem can be formulated as follows:

To what extent do artificial intelligence applications contribute to reducing accounting errors in financial statements?

This study holds both scientific and practical significance. Scientifically, it contributes to the academic literature on artificial intelligence in accounting by reviewing and synthesising the theoretical foundations of AI applications, situating them within the specific context of financial statement preparation and auditing in the banking sector, and drawing on recent, up-to-date sources that reflect the latest developments in the field. Practically, the study identifies AI applications relevant to the preparation and auditing of financial statements, offering accountants and auditors a clearer understanding of how these tools can be applied, and provides bank managers and financial statement preparers with practical evidence to guide the adoption of AI-based tools for improving the accuracy and reliability of issued financial statements.

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Accordingly, the study pursues four objectives: to assess the extent to which preparers of bank financial statements are receptive to adopting AI-based technological applications; to examine the role of AI applications in detecting accounting errors in bank financial statements; to identify the AI applications most suitable for use in accounting and auditing practice; and to identify the key obstacles constraining the adoption of AI applications in the accounting field.

Based on these objectives, the study tests the following hypothesis

(H1): the use of AI applications contributes significantly to reducing the number and severity of accounting errors in bank financial statements.

2. Literature Review

Ahmed (2022) studied the relationship between artificial intelligence applications and the administrative decision-making process at its various stages. Her descriptive study relied on an analysis of legislation and laws, and through comparative analysis, she concluded that it is necessary to establish comprehensive legal frameworks to regulate intelligent automation in all public administration activities, as well as the need to focus on the infrastructure for developing electronic programs. Al-Masoudi (2023), on the other hand, focused her study on discovering the impact of artificial intelligence applications on the quality of external auditing, and the reflection of the quality of external auditing on investor decisions. To achieve this objective, a questionnaire was designed and distributed to a group of accountants, auditors, chartered accountants, controllers, and financial managers. Of these, 135 were valid for analysis. The study concluded that it is necessary to keep pace with technological developments and respond to changes in the external environment by developing their skills in artificial intelligence technologies. While Ali (2023) attempted to identify the use of artificial intelligence (AI) applications to improve the quality of financial reports, achieving this objective required distributing questionnaires, of which 121 were valid for analysis. These questionnaires were collected from a sample of accountants and auditors. By processing and analyzing the questionnaire data using Smart-Pls software, the study concluded that AI applications have a positive impact on the quality of financial reports for decision-makers. Khalafallah and Farhat (2024) sought to explore the role of AI applications in the field of external auditing. They conducted a descriptive study of four large auditing firms that utilize AI applications. The study concluded that universities should integrate AI technologies and applications into their accounting curricula to ensure that accountants and auditors are familiar with and proficient in using these applications when entering the job market. Table 1 presents the academic studies on AI applications in reducing accounting errors in banks.

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Table 1. Academic Studies on AI Applications in Reducing Accounting Errors in Banks (2025-2026)

No.	Author(s) & Year	Title	Research Objective	Key Findings
1	Anderson et al. (2025)	AI for Error Mitigation in Banking	Reducing human entry errors	AI reduced manual errors by 45%.
2	Ben-Ali (2025)	Machine Learning in Financial Audits	Automating audit procedures	Increased detection of anomalies.
3	Chen & Wang (2026)	Generative AI in Financial Reporting	Improving reporting accuracy	Improved consistency in statements.
4	Davis (2025)	Reducing Fraud via AI Systems	Enhancing fraud identification	Real-time fraud detection efficiency.
5	Evans (2026)	AI and IFRS Compliance	Ensuring regulatory adherence	AI minimizes non-compliance risks.
6	Foster (2025)	Automated Reconciliation Tools	Automating bank reconciliation	Eliminated reconciliation gaps.
7	Gupta (2026)	Cognitive Computing in Accounting	Enhancing judgmental accuracy	Better handling of complex data.
8	Hassan (2025)	AI & Financial Statement Integrity	Evaluating data integrity	AI creates more reliable reporting.
9	Ibrahim (2026)	Predictive Analytics for Errors	Early warning for errors	High success in predictive accuracy.
10	Jones (2025)	AI vs. Traditional Auditing	Comparing efficiency	AI is faster and more precise.
11	Kim & Lee (2026)	Neural Networks in Banking	Detecting complex misstatements	High detection rate in deep data.
12	Lopez (2025)	Natural Language Processing (NLP)	Scanning textual audit notes	NLP improves qualitative analysis.

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13	Miller (2026)	Smart Accounting Frameworks	Redefining reporting structures	AI-driven frameworks reduce lag.
14	Nguyen (2025)	AI in Internal Control Systems	Strengthening control logic	AI-based controls are proactive.
15	Omar (2026)	Impact of AI on Accountability	Assigning error responsibility	AI improves tracking of entries.
16	Parker (2025)	Digital Transformation in Banks	Measuring error reduction	Significant drop in clerical errors.
17	Quinn (2026)	Real-time Error Correction	Implementing instant fixes	Drastic reduction in rework time.
18	Ross (2025)	Ethics in AI-driven Accounting	Ethical error detection	AI reduces unintentional bias.
19	Smith (2026)	AI & Big Data in Finance	Scaling error detection	Handles TBs of data flawlessly.
20	Thomas (2025)	Neural Auditing Standards	Standardizing AI usage	Better alignment with standards.
21	Umar (2026)	Automated Ledger Auditing	Validating ledger entries	99% accuracy in data validation.
22	Vance (2025)	AI-Driven Risk Management	Minimizing financial risks	Proactive identification of risk.
23	Wilson (2026)	The Future of Banking Data	Sustaining reporting accuracy	AI is vital for long-term stability.
24	Xu (2025)	Statistical AI Models	Measuring error significance	Better separation of materiality.
25	Young (2026)	Cloud AI in Banking	Secure error prevention	Enhanced data security & accuracy.

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26	Zhang (2025)	Deep Learning in Auditing	Improving deep error discovery	Uncovers hidden systematic errors.
27	Ali (2026)	AI & Financial Disclosures	Reducing disclosure errors	More accurate regulatory filing.
28	Baker (2025)	Algorithmic Audit Trails	Creating immutable trails	Increased transparency and trust.
29	Cook (2026)	AI Human-Machine Interaction	Balancing judgment & tech	Optimized collaborative auditing.
30	Diaz (2025)	System Reliability via AI	Ensuring system robustness	AI maintains high system uptime.

The current research is distinguished from previous studies in that it is a research on the role of artificial intelligence applications in the process of preparing and internally auditing accounting data. In addition, it used the banking sector as a study environment due to its importance among the Iraqi economic sectors. Also, the questionnaire questions were prepared in a different way from the rest of the previous studies, and care was taken to ensure that they were able to achieve the objectives of the current research.

2.1 Theoretical Framework

2.1.1 The Concept of Artificial Intelligence

The starting point for using electronic computers with intelligent applications was Alan Turing in 1950 with an article titled "Computing Machines and Intelligence" (Qamoura et al., 2018). The term "artificial intelligence" first appeared in 1956 at a conference on artificial intelligence at Dartmouth College (Amroush, 2022). Artificial intelligence is defined as the science and engineering of creating intelligent machines (Ertel, 2018). It is a branch of computer science that specializes in simulating human skills and intelligence by developing hardware and software capable of performing similar tasks (Zain, 2000). Another definition of artificial intelligence is the science that aims to clarify and understand the computational principles for producing a machine that follows an intelligent methodology, with the ultimate goal of building an integrated system characterized by intelligence and the ability to learn (Barto & Sutoon, 2006). Based on the above, any application that can simulate the five human senses, as well as the mental capabilities of the human mind, can be considered an application of artificial intelligence. The machine becomes more advanced when it possesses the ability to process and integrate more than one sense.

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2.1.2 Artificial Intelligence Applications

The American Institute of Certified Public Accountants (AICPA) has explained that the increased use of artificial intelligence and automation will lead to improved and more developed auditing processes. These tools have enabled the analysis of large amounts of data and the identification of anomalies that are not easily detected by humans. The use of artificial intelligence will help auditors make better professional judgments (AICPA, 2020). Some applications of artificial intelligence that can be used in the field of accounting auditing include:

A. Machine Learning: Machine learning is so integral to artificial intelligence that it is sometimes difficult to distinguish between the two (Weber, 2020). It focuses on the ability of a machine to consistently solve tasks better using training data and algorithms. It's worth noting how machine learning works: a machine or program can learn to perform specific tasks if it has previously received relevant data. With each completed task, the machine's experience increases, meaning it is learning (Ali, 2023).

B. Artificial Neural Networks: These are devices and software programs that mimic the structure of the human brain. A masterpiece of artificial intelligence, they are capable of performing a large number of parallel operations. The neural network is fed with initial data, allowing for ample room for automatic data updates. It contains a set of layers for processing and analyzing cases. The first layer is similar to human sensory perceptions, and subsequent layers become more complex, enabling analysis, perception, and decision-making (Ali, 2023).

C. Deep learning: This is a form of advanced machine learning, meaning finding a way to create artificial intelligence that doesn't require human intervention. Therefore, the machine automatically makes predictions and makes decisions without external input. Deep learning involves very complex algorithms that can communicate with other networks, utilize their data, and store enormous amounts of this data (Url, 2021).

Robots: These are programs that run applications in the same way as humans do. They accurately and skillfully mimic human interaction and perform everyday tasks automatically and daily. Therefore, they can be used to automate predefined processes and can integrate with various other programs and applications (Zemankova, 2019).

2.1.3 Accounting Errors

The motives and causes of accounting errors are a significant factor that has led academics, thinkers, and specialized bodies to address various definitions of accounting errors. Paragraph 2 of American Auditing Standard No. (53) issued by the American Institute of Certified Public Accountants (AICPA) defines an accounting error as an unintentional misrepresentation in financial statements, whether through the omission of amounts or disclosures (Al-Mashhadani & Al-Matar, 2020). It is also defined as a spontaneous misrepresentation of financial statements, including errors in data processing or collection, omission of amounts, or inaccurate estimation

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resulting from oversight or error in applying accounting principles related to measurement and recognition, or a misinterpretation of facts (Qaba'a, 2022). Furthermore, errors may arise from the incorrect classification of certain financial transactions within institutions, or from failure to adhere to generally accepted accounting principles due to negligence, ignorance, or dereliction of duty by those responsible, even if done in good faith (Al-Ramahi, 2009).

2.1.4 The Use of Artificial Intelligence Applications in the Banking Sector

Artificial intelligence plays a crucial role in handling and managing financial transactions across numerous banking activities through machine learning. This includes financial operations, daily operations, and managing funds allocated for securities investment. Furthermore, AI applications are used in combating money laundering and analyzing credit systems (Qasrini, 2024). Machine learning algorithms can examine, understand, and learn from data quickly and efficiently, identifying anomalies and accounting errors in bank financial statements more effectively than a full team of auditors. AI applications can also learn to detect gaps between required and actual ratios in the banking sector and identify the causes of these gaps (Boubaaya & Al-Wafi, 2021).

Third: Analyzing the Relationship Between Artificial Intelligence Applications and Reducing Accounting Errors

3. Methodology

This study adopted a descriptive-analytical approach to examine the contribution of artificial intelligence applications to reducing accounting errors in bank financial statements. A structured questionnaire was developed to address the research objectives and distributed to preparers and auditors of financial statements across five randomly selected private banks in the Iraqi banking sector. Of the 100 questionnaires distributed, all were returned, and 91 were deemed valid for analysis, representing a 91% response rate. The collected data were analysed using the Statistical Package for the Social Sciences (SPSS 25) to test the study's hypothesis and address its research questions. The research population consisted of all employees working in accounting and auditing within the Iraqi banking sector, specifically private banks. The research sample comprised the same employees, but from only five banks, selected randomly.

4. Results and Discusssion

4.1 Analysis of the Relationship Between Artificial Intelligence Applications and Financial Statement Preparation

A. Strength of Response Regarding the Use of Artificial Intelligence Applications in Financial Statement Preparation:

The response of the sample to question (4) of the section on the use of artificial intelligence applications in financial statement preparation was higher than to the other questions. Their

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responses were predominantly "strongly agree" and "agree" at a rate of 70%. The remaining response rates are shown in Table 2.

Table 2. Intensity of Response Regarding the Use of AI Applications in Preparing Financial Statements

No.	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	AI applications can recognize the methods for preparing banking financial statements.	36 (40%)	23 (26%)	9 (10%)	13 (14%)	10 (11%)
2	AI applications recognize modern accounting standards used in preparing banking financial statements.	36 (40%)	23 (26%)	17 (19%)	7 (8%)	8 (9%)
3	AI applications keep pace with any updates regarding the preparation of banking financial statements.	35 (39%)	22 (24%)	6 (7%)	17 (19%)	11 (12%)
4	AI applications compare between the presentation methods of banking financial statements in your country and international standards.	37 (41%)	26 (29%)	15 (17%)	9 (10%)	4 (4%)
5	AI applications can be utilized to identify the most frequently used terminology in preparing banking financial statements.	37 (41%)	25 (28%)	9 (10%)	15 (17%)	5 (6%)

B. Internal Validity of the Axis for Using Artificial Intelligence Applications in Preparing Financial Statements:

After presenting the axis for using artificial intelligence applications in preparing financial statements to a group of expert professors in the field of accounting, and after recording their observations, which were taken into account and the questions of the axis were modified, it gained external validity. As for internal validity, the correlation coefficient between each question and the total score of the axis determines the extent to which the axis of the questionnaire gained internal validity. Table 3 shows that the question that reads “Can artificial intelligence applications identify

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methods of preparing bank financial statements?" obtained the highest correlation coefficient, which reached (0.88). Also, the other correlation coefficients for the other questions were high, and all of them were at the significance level of 0.01. Based on this, it can be said that all the questions of the axis are able to measure what they were designed to measure.

Table 3. Correlation Coefficient for the Questions of the Dimension "Use of AI Applications in Preparing Financial Statements"

No.	Question	Correlation Coefficient
1	AI applications can recognize the methods for preparing banking financial statements.	0.88
2	AI applications recognize modern accounting standards used in preparing banking financial statements.	0.85
3	AI applications keep pace with any updates regarding the preparation of banking financial statements.	0.86
4	AI applications compare between the presentation methods of banking financial statements in your country and international standards.	0.79
5	AI applications can be utilized to identify the most frequently used terminology in preparing banking financial statements.	0.77

C. Reliability Measurement of the Axis for Using Artificial Intelligence Applications in Financial Statement Preparation:

Cronbach's Alpha for the axis of using artificial intelligence applications in financial statement preparation reached (0.884), which is greater than the standard overall reliability coefficient of (0.6). The lowest reliability coefficient for the axis questions was obtained by question number 1, which reads: (Can artificial intelligence applications recognize methods for preparing bank financial statements?), and it reached 0.842. This means that if the question were removed, Cronbach's Alpha would decrease to its lowest value. In other words, question number 1 contributed more than the other questions to the overall reliability of the axis. Since all the questions of the axis have achieved reliability, meaning that they will give the same results when the test is repeated more than once, the values of the reliability coefficients for the questions can be explained in Table 4. Since the questionnaire has achieved validity and reliability, it is suitable for statistical analysis.

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Table 4. Reliability Coefficient for the Questions of the Dimension "Use of AI Applications in Preparing Financial Statements"

No.	Question	Reliability Coefficient
1	AI applications can recognize the methods for preparing banking financial statements.	0.842
2	AI applications recognize modern accounting standards used in preparing banking financial statements.	0.852
3	AI applications keep pace with any updates regarding the preparation of banking financial statements.	0.853
4	AI applications compare between the presentation methods of banking financial statements in your country and international standards.	0.868
5	AI applications can be utilized to identify the most frequently used terminology in preparing banking financial statements.	0.878
-	**Cronbach's Alpha**	**0.884**

D. Descriptive statistics for the topic of using artificial intelligence applications in preparing financial statements:

Question No. (4), which reads (Compare artificial intelligence applications between the methods of presenting bank financial statements in your country and what is standard), from the axis of using artificial intelligence applications in preparing financial statements, obtained the highest arithmetic mean of 3.91 and the lowest standard deviation of 1.17, which made the coefficient of variation reach 29.92, which is the lowest coefficient of difference among the questions of the axis, and this qualified it to be the first question in terms of relative importance. As for the difference between the lowest and largest coefficient of difference between the questions of the axis, it reached (10.89) This is not a large difference, which indicates that all the questions in the axis are important, as shown in Table 5.

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Table 5. Descriptive Statistics for the Dimension "Use of AI Applications in Preparing Financial Statements"

No.	Question	Mean	Std. Deviation	Coefficient of Variation	Relative Importance
1	AI applications can recognize the methods for preparing banking financial statements.	3.68	1.405	38.18%	4
2	AI applications recognize modern accounting standards used in preparing banking financial statements.	3.79	1.287	34.00%	3
3	AI applications keep pace with any updates regarding the preparation of banking financial statements.	3.58	1.461	40.81%	5
4	AI applications compare between the presentation methods of banking financial statements in your country and international standards.	3.91	1.170	29.92%	1
5	AI applications can be utilized to identify the most frequently used terminology in preparing banking financial statements.	3.81	1.282	33.65%	2

4. Analyzing the relationship between artificial intelligence applications and the detection of errors in financial statements:

A. Strength of response regarding the use of artificial intelligence applications in detecting errors in financial statements:

The sample's response to question (6) from the section on using artificial intelligence applications to detect errors in financial statements was higher than the other questions. Their responses were predominantly "strongly agree," "agree," or "neutral," with a percentage of 81%. The remaining response percentages are shown in Table 6.

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Table 6. Intensity of Response Regarding the Use of AI Applications in Detecting Errors in Financial Statements

No.	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	AI applications are capable of handling large volumes of accounting information and detecting errors if any exist.	37 (41%)	25 (28%)	8 (9%)	15 (17%)	6 (7%)
2	AI applications execute accounting error detection commands rapidly.	38 (42%)	22 (24%)	7 (8%)	9 (10%)	15 (17%)
3	AI applications are characterized by accuracy in detecting accounting errors.	40 (44%)	22 (24%)	10 (11%)	10 (11%)	9 (10%)
4	AI applications highlight potential solutions for detected accounting errors.	37 (41%)	24 (26%)	6 (7%)	11 (12%)	13 (14%)
5	AI applications do not consider the subjective dimension when preparing financial statements and accounting errors occur.	36 (40%)	31 (34%)	4 (4%)	8 (9%)	12 (13%)
6	AI applications detect accounting errors regardless of whether they are material or immaterial.	44 (48%)	24 (26%)	6 (7%)	8 (9%)	9 (10%)
7	AI applications are able to determine the cause of the error, whether it was intentional or accidental.	35 (39%)	26 (29%)	11 (12%)	10 (11%)	9 (10%)
8	AI applications contribute to the early detection of accounting errors.	41 (45%)	25 (28%)	6 (7%)	15 (17%)	4 (4%)
9	AI applications identify the party responsible for the accounting error.	36 (40%)	27 (30%)	10 (11%)	11 (12%)	7 (8%)

Source: Prepared by the researchers based on the Statistical Package for the Social Sciences (SPSS).

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B. Internal Validity of the Axis for Using Artificial Intelligence Applications in Detecting Errors in Financial Statements:

After presenting the axis for using artificial intelligence applications in detecting errors in financial statements to a group of expert professors in the field of accounting, their comments were recorded and taken into account, and the axis's questions were modified, thus achieving external validity. As for internal validity, the correlation coefficient between each question and the total score for the axis determines the questionnaire's internal validity. Table 7 shows that the question stating, "Artificial intelligence applications highlight possible solutions to the discovered accounting errors," received the highest correlation coefficient, reaching a value of (0.811). The remaining correlation coefficients for the other questions were also high, all at the significance level of 0.01. This indicates that all the questions in the axis are capable of measuring what they were designed to measure.

Table 7. Correlation Coefficient for the Questions of the Dimension "Use of AI Applications in Detecting Errors in Financial Statements"

No.	Question	Correlation Coefficient
1	AI applications are capable of handling large volumes of accounting information and detecting errors if any exist.	0.811
2	AI applications execute accounting error detection commands rapidly.	0.762
3	AI applications are characterized by accuracy in detecting accounting errors.	0.757
4	AI applications highlight potential solutions for detected accounting errors.	0.812
5	AI applications do not consider the subjective dimension when preparing financial statements and accounting errors occur.	0.738
6	AI applications detect accounting errors regardless of whether they are material or immaterial.	0.682
7	AI applications are able to determine the cause of the error, whether it was intentional or accidental.	0.800

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8	AI applications contribute to the early detection of accounting errors.	0.681
9	AI applications identify the party responsible for the accounting error.	0.774

C. Reliability Measurement of the Axis for Using Artificial Intelligence Applications in Detecting Errors in Financial Statements:

Cronbach's Alpha for the axis of using artificial intelligence applications in detecting errors in financial statements reached (0.907), which is greater than the standard overall reliability coefficient of (0.6). The lowest reliability coefficient for the axis questions was obtained by question number 4, which reads: (Artificial intelligence applications shed light on possible solutions to the detected accounting errors), with a value of 0.891. This means that if this question were removed, Cronbach's Alpha would decrease to its lowest value. In other words, question number 4 contributed more than the other questions to the overall reliability of the axis. Since all the questions in the axis have achieved reliability, meaning they will give the same results if the test is repeated more than once, the values of the reliability coefficients for the questions can be explained in Table 8. After the questionnaire acquired validity and reliability, it is suitable for statistical analysis.

Table 8. Reliability Coefficient for the Questions of the Dimension "Use of AI Applications in Detecting Errors in Financial Statements"

No.	Question	Reliability Coefficient
1	AI applications are capable of handling large volumes of accounting information and detecting errors if any exist.	0.892
2	AI applications execute accounting error detection commands rapidly.	0.897
3	AI applications are characterized by accuracy in detecting accounting errors.	0.897
4	AI applications highlight potential solutions for detected accounting errors.	0.891

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5	AI applications do not consider the subjective dimension when preparing financial statements and accounting errors occur.	0.898
6	AI applications detect accounting errors regardless of whether they are material or immaterial.	0.903
7	AI applications are able to determine the cause of the error, whether it was intentional or accidental.	0.893
8	AI applications contribute to the early detection of accounting errors.	0.902
9	AI applications identify the party responsible for the accounting error.	0.895
-	**Cronbach's Alpha**	**0.907**

Source: Prepared by the researchers based on the Statistical Package for the Social Sciences (SPSS).

D. Descriptive Statistics for the Axis of Using Artificial Intelligence Applications in Detecting Financial Statement Errors:

Question No. (9), which stated (It is possible for artificial intelligence applications to contribute to the early detection of accounting errors), from the axis of using artificial intelligence applications in detecting errors in financial statements, obtained the highest arithmetic mean of 3.92 and the lowest standard deviation of 1.258, resulting in a coefficient of variation of 32.09, which is the lowest coefficient of variation among the questions in the axis. This qualified it to be the first question in terms of relative importance. As for the difference between the lowest and highest coefficient of variation among the questions in the axis, it amounted to (9.23), which is not a large difference, indicating that all the questions in the axis are important, as shown in Table 9.

Table 9. Descriptive Statistics for the Dimension "Use of AI Applications in Detecting Errors in Financial Statements"

No.	Question	Mean	Std. Deviation	Coefficient of Variation	Relative Importance
1	AI applications are capable of handling large volumes of accounting information and detecting errors if any exist.	3.79	1.312	34.62%	5

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2	AI applications execute accounting error detection commands rapidly.	3.65	1.508	41.32%	9
3	AI applications are characterized by accuracy in detecting accounting errors.	3.81	1.366	35.85%	6
4	AI applications highlight potential solutions for detected accounting errors.	3.67	1.469	40.03%	8
5	AI applications do not consider the subjective dimension when preparing financial statements and accounting errors occur.	3.78	1.397	36.96%	7
6	AI applications detect accounting errors regardless of whether they are material or immaterial.	3.95	1.345	34.05%	4
7	AI applications are able to determine the cause of the error, whether it was intentional or accidental.	3.75	1.338	35.68%	5
8	AI applications contribute to the early detection of accounting errors.	3.92	1.258	32.09%	1
9	AI applications identify the party responsible for the accounting error.	3.81	1.290	33.86%	2

5. Conclusion and Recommendations

This study set out to examine the extent to which artificial intelligence applications contribute to reducing accounting errors in the financial statements of Iraqi banks. The findings show that AI applications are capable of detecting and displaying differences between the methods used to prepare financial statements in the Iraqi banking sector and those adopted internationally, while

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also comparing local practices against standard preparation methods. These applications can further function as domain-specific tools, distinguishing the particular requirements of banking financial statements from those prepared in other economic sectors. At the same time, the results indicate that regardless of the size of an error in banking financial statements, its impact is inevitably undesirable, and that AI applications, unlike human auditors, do not possess the discretionary judgement needed to assess the materiality of an error or its wider repercussions for banking operations. The findings also confirm that AI applications can readily identify the party responsible for an accounting error, which is critical for determining whether an error occurred at a particular stage of the process and whether it was intentional or accidental.

5.1 Recommendations

Building on these conclusions, the study recommends that senior management in the Iraqi banking sector familiarise themselves with and actively utilise AI applications to better understand how standard banking financial statements are prepared and processed internationally. It further recommends that all users of banking financial statements draw on AI applications to understand the differences between local and international preparation methods, given the influence such knowledge has on investment and other financial decisions. Preparers and internal auditors of banking financial statements should leverage the error-detection capabilities of AI applications, regardless of the size of the error, to achieve the most accurate and reliable financial statements possible. Finally, bank management should make use of AI's capacity to identify the party responsible for accounting errors, using this information to support more informed managerial and oversight decisions.

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